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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/835,063 Confirmation No. : 3891
Applicant : FOCKE RASS, et al.
Filed : April 16, 2001
TC/A.U. : 3677
Examiner : Gary Wayne ESTREMSKY
Docket No. : 038738.49847
Customer No. : 23911
Title : VEHICLE LOCK, IN PARTICULAR FOR A TAILGATE
DOOR

Appeal No. : N/A

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

December 9, 2003

APPEAL BRIEF

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GROUP 3600

Sir:

Pursuant to the Notice of Appeal filed September 9, 2003, Appellants herewith submit their appeal brief and appropriate fee in accordance with the provisions of 37 C.F.R. §§1.17(f) and 1.192. A one-month extension of time petition under 37 C.F.R. §1.136(a) is submitted herewith.

I. REAL PARTY IN INTEREST

This application has been assigned by the inventors to DaimlerChrysler AG, a German corporation. Accordingly, the real parties in interest to the present appeal are the named inventors and DaimlerChrysler AG.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants, to Appellants' legal counsel or to the assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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III. STATUS OF CLAIMS

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Claims 1-7 are currently pending in this application. Of these, Claim 6 has been indicated to be directed to allowable subject matter, and would be allowable if rewritten in independent form, as set forth in paragraph 4 of the Office Action dated May 9, 2003. Claims 1-5 and 7, on the other hand, have been finally rejected on prior art grounds, as discussed hereinafter.

Claim 6 has been objected to by the Examiner based on a formal issue cited in paragraph 1 at page 2 of the final rejection. Concurrently herewith, Appellants have submitted an Amendment under Rule 116, which is believed to resolve such formal grounds of rejection.

IV. STATUS OF AMENDMENTS

Two amendments have been submitted with regard to the present application. The first, dated September 23, 2002 responsive to the first Office Action of May 23, 2002, has been entered. As noted previously, Appellants have submitted concurrently herewith an Amendment under Rule 116 which addresses the formal grounds of rejection set forth in the final Office Action of May 9, 2003. Appellants have requested that this amendment be entered in order to place the claims in better form for appeal by narrowing the issues, and accordingly, for the purpose of this Appeal Brief, it is assumed that this amendment has been entered.

V. SUMMARY OF THE INVENTION

The present invention is directed to a locking mechanism of the type which may be used for a trunk lid of a vehicle, in which a locking housing 1 engages vertically into an interior recess of a latching housing 2. (See Figure 1.) In order to guide the locking housing properly into the latching housing, allowing for any lateral tolerance or "offset" (that is, a slight misalignment of the two housings), the invention includes a pair of trapezoidal wedges 7 (Specification paragraph [0014]), which bear against the side of the lock housing, guide it into position, and fix it laterally, once the lock is engaged. For this purpose, the wedges 7 are resiliently displaceable in the latching (vertical) direction by rough positioning guide elements

and fine positioning guide elements. The former guide the tapered edges of the lock housing into approximately the proper lateral alignment, so that the fine positioning guide elements can thereafter assure a precise and proper alignment of the lock housing and the latching housing.

According to the invention, the rough-positioning guide elements are provided in the form of longitudinally extending bores 8 which engage with longitudinally extending guide rods 9 and guide the respective wedges in the latching direction. (Specification paragraph [0015].) For this purpose, the rough-positioning guide elements (that is, the respective bores and guide rods) are provided with a sufficiently large amount of play to permit lateral movement of the wedges 7, so that lateral movement of the lock housing is possible. In this manner, as noted, the locking housing 1 is guided into approximately the proper lateral alignment, permitting further fine positioning by the latching wedges 7 bearing against the side walls 11 of the latch housing 2. (Specification paragraph [0017].)

VI. ISSUES

The issue presented by this appeal is whether Claims 1-5 and 7 are unpatentable under 35 U.S.C. §103(a) over European Patent Document EP 0 314 075 B1 in view of Roethel (U.S. Patent No. 2,629,621).

VII. GROUPING OF THE CLAIMS

For the purpose of this appeal, Claims 1-5 and 7 may be grouped together. Claim 6, which has been indicated to be directed to allowable subject matter, stands separately, and is not part of the present appeal.

VIII. ARGUMENT

According to a feature of the present invention, play between the bores and guide rods permits lateral movement of the wedges 7, as noted previously, providing a rough positioning of the lock housing relative to the latch housing. This feature of the invention is recited in both Claims 1 and 7. Claim 1, for example, recites not only that the respective guide rods engage axially in the bores of the wedges 7, "with guide play between the bore and the associated guide rod", but also that:

"an amount of guide play between said bore and the associated guide rod in the rough-positioning guide elements allows rough lateral positional fixing of the latching wedges between the lock housing and the latching housing".

The latter feature of the invention is neither taught nor suggested by either the Galantucci patent (EP '075) or by Roethel.

The Galantucci reference (EP 0 314 075 B1) is discussed in the specification of the present application at paragraph [0003]. As pointed out there, in Galantucci, as best seen in Figure 3, the latching wedges 26 are guided vertically by means of tongue and groove elements. As a result, when the lock is latched in place, malfunctions may occur due to binding of the latching wedges tilting with the guiding elements.

As acknowledged in the first Office Action at paragraph 5, Galantucci does not disclose the use of bores and guide rods associated with each of the wedges 26. However, this feature is said to be taught by the Roethel reference, which includes wedge blocks 60 that are slideable in a horizontal direction on a supporting surface 59. The wedge blocks are guided in their sliding movement by rod 61, and biased against inward movement by a spring 64. As can be seen by a comparison of Figures 1 and 2, as the abutment member 48 which partially surrounds the rotary latch bolt 49 moves from left to right (as it would, when the vehicle door is closed), the abutment member 48 engages with the curved surface 60a of the wedge block 60, moving it toward the right against the force of the spring 64. In the closed position of Figure 2, the abutment member 48 abuts against the wedge block 60, fixing the door against vertical movement. See Column 4, lines 30-41 and lines 58-69.

Assuming for the sake of discussion that Roethel does contain a slideable wedge which has a bore and a corresponding guide rod, it does not teach or suggest the provision of "an amount of guide play between said bore and the associated guide rod [which is sufficient to allow] rough lateral positional fixing of the latching wedges between the lock housing and the latch housing", as recited in Claim 1, for example. (Claim 7 is similarly limited.) Indeed, Roethel contains no disclosure which suggests that any such play is allowed between the wedge block 60 and the rod 61. Moreover, in Roethel there would appear to be no utility in providing such play for allowing vertical movement of the wedge block, comparable to that of the present invention, because gravity will hold the wedge block 60 against the sliding surface 59 in any event.

In both Galantucci and Roethel, rough-positioning of the locking housing relative to the latching housing is provided by an entirely different mechanism. In particular, in Roethel, rough-positioning is provided by the tapered surface 62a of the portion 62 of the base 52 of the keeper frame, with which the latch bolt initially engages and meshes. (See Column 4, lines 6-11.) In Galantucci, on the other hand, rough-positioning is provided by the provision of upper and lower oblique surfaces 34 and 35 on the wedge-shaped blocks 26, with the respective surfaces having different angles of inclination. As indicated at Column 4, lines 34-40, the more inclined surfaces 34 define a "lead in" which facilitates the insertion of the lock plate 2 into the striker unit 4. Galantucci therefore accomplishes rough-positioning by an

arrangement which is both structurally and functionally different from that defined by the claims of the present application.

Since neither Galantucci nor Roethel teaches or suggests the rough-positioning of the locking housing relative to the latching housing by the provision of play between the latching wedges 7 and the guide rods 9 (as recited in Claims 1 and 7) in order to permit lateral movement of the latching wedges, Appellants respectfully submit that the claims of the present application distinguish over the cited references.

In regard to the latter proposition, the Supplement to the Advisory Action, dated August 28, 2003 states at page 3 that, "Applicant argues that the Roethel patent has no 'explicit discussion' of 'guide play' but does not address explicit illustration of tolerance or 'guide play' in Figures 2-4 of the reference for example." (The use of the word "explicit", it should be noted, originated in the Office Action, which states at paragraph 5 (page 4) that Roethel "explicitly" discloses substantial tolerance between the guide rod and the bore, and inherently teaches "guide play" in the form of the "substantial gap between the guide rod and bore".)

Applicants respectfully submit that Roethel contains no disclosure (either express or implied, or by way of discussion or illustration) which relates to the provision of "guide play", as indicated in the Office Action. Indeed, quite the opposite

is true. That is, the structure in Roethel allows for no lateral (in the context of Roethel, upward and downward) movement of the wedge block 60 at all.

Referring to Figures 1 and 2 of Roethel, in particular, it is noted that the rod 61 which guides the wedge block 60 extends not only through the "recess" 63 in the wedge (in which the spring 64 is mounted), but also through a smaller diameter bore (unnumbered) at the left portion of the wedge block. The latter shows no play whatsoever, both the rod 60 and the bore through which it extends being indicated by the same dashed line. Thus, insofar as the disclosure in Roethel indicates, the wedge block 60 is guided snugly on the rod 61, and nothing in Roethel suggests that any sort of lateral (upward and downward) play or movement is permitted, would be useful or even tolerable, or otherwise addresses that issue.

That is, the structure as depicted in Figures 1 and 2 allows for no lateral movement of the wedge block 60, nor is there anything in the disclosure which would suggest a provision for such lateral movement. Accordingly, Roethel fails to teach or suggest the provision of an amount of guide play between the bore and the associated guide rods which allows rough lateral positioning fixing of the lateral wedges between the lock housing and the latch housing, as recited in Claims 1 and 7. Moreover, as noted previously, the disclosure in Roethel et al not only fails to disclose any such lateral movement or lateral positioning, but to the extent that any inference can be drawn from the drawings (Figures 1 and 2) such lateral movement

is not possible, and certainly not possible to such an extent as to allow rough lateral positional fixing of the latching wedges as recited in the claims.

As noted previously, such lateral positioning plays an important role in the overall operation of the locking mechanism according to the present invention in that it provides a mechanism for guiding the locking housing 1 into approximately the proper lateral alignment, as discussed in the specification at paragraph [0017] at the top of page 6. Such rough positioning in the Roethel apparatus is provided by contact between the bottom surface of the abutment casing 48 and the curved or tapered surface 62a of the portion 62, as noted at Column 4, lines 4-13. Hence, lateral (upward or downward) movement of the wedge block 60 would have no utility in the context of the Roethel latch bolt keeper. Accordingly, since neither the Roethel patent nor the Galantucci patent (EP '075) teaches or suggests the above feature of the invention, it follows that the combination of the two would not yield the invention as recited in Claims 1 and 7.

For the foregoing reasons, Applicants respectfully submit that Claims 1 and 7 are therefore allowable over the prior art of record, as are all remaining claims, which depend, directly or indirectly therefrom.

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IX. CONCLUSION

For the reasons set forth in detail above, Appellants respectfully submit that all of Claims 1-7 currently pending in the present application distinguish over the cited combination of Galantuci and Roethel. Accordingly, Appellants respectfully request that the Board reverse the final rejection of Claims 1-5 and 7 and allow the present application.

This Appeal Brief is accompanied by a check in the amount of \$330.00 in payment of the required appeal fee. This amount is believed to be correct, however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323 (Docket #225/49847). A triplicate copy of this Appeal Brief is attached.

****A one month extension of time petition under 37 C.F.R. 1.136(a) is submitted herewith.****

Respectfully submitted,



Gary R. Edwards
Registration No. 31,824

CROWELL & MORING, LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
GRE:kms/038738

APPENDIX

1. A vehicle lock mechanism having a latching housing which is mountable to a support or to the body of the vehicle in a variable position and a lock housing which can be introduced into the latching housing, wherein:

a rotary latch is mounted in the lock housing;

the latching housing is provided with an interior space for accommodating the lock housing, said interior space having side walls;

when the lock is closed, the lock housing lies within the interior space of the latching housing, with the rotary latch secured against an abutment of the latching housing;

the lock housing tapers trapezoidally in a pivoting plane of the rotary latch, becoming progressively narrower in the latching direction, towards the latching housing;

within the latching housing, spring biased sliding wedges are resiliently displaceable in the latching direction on rough positioning guide elements and fine-positioning guide elements, said sliding wedges having tapered edges with a wedge angle corresponding to a slope of tapered edges of the lock housing and being assigned to each of said two tapered edges of the lock housing;

the rough-positioning guide elements comprises a bore extending in the latching direction within each latching wedge, and an associated guide rod which engages axially in the said bore and is fastened rigidly to the latching housing, with guide play between the bore and the associated guide rod;

the fine-positioning guide elements comprises planar inner guide surfaces of side walls of the latching housing;

planar side surfaces of the latching wedges are slideably displaceable against said inner guide surfaces, in said latching direction; and

when the lock is being closed, an amount of guide play between said bore and the associated guide rod in the rough-positioning guide elements allows rough lateral positional fixing of the latching wedges between the lock housing and the latching housing whereby fine lateral positional fixing can be performed by the fine-positioning guide elements.

2. (Amended) The vehicle lock according to Claim 1, wherein the latching housing comprises at least one baseplate to which said side walls are rigidly affixed.

3. The vehicle lock according to Claim 1, wherein the abutment is fastened solely on the baseplate of the latching housing.

4. The vehicle lock according to Claim 3, wherein the abutment is designed as a U-shaped latching bracket with the ends of the U limbs fastened to a baseplate.

5. The vehicle lock according to Claim 1, wherein the latching housing comprises a baseplate and a covering which can be fitted releasably to the latter and encloses the latching wedges.

6. The vehicle lock according to Claim 1, wherein:

the lock housing has an introductory slot which is open at one end and which engages the abutment of the latching housing in the pivoting plane of the rotary latch laterally with respect to the latching direction;

the introductory slot has a region with a narrowest slot portion lying between its open end and an opposite end thereof; and

during latching of the lock, the abutment of the latching housing passes through the portion with the narrowest slot width.

7. A vehicle lock comprising:

a latch housing which is fixedly mountable at a variable location on a vehicle body or on a support member thereon;

a lock housing which is mountable to a movable member that is to be locked to said vehicle body, said lock housing being insertable in a latching direction into a locked position in said latch housing, and having an approximately trapezoidal shape with tapered lateral edges which define a progressively narrow transverse dimension in the latching direction;

a rotary latch mounted in said lock housing for engaging with a latching bracket mounted in said latch housing;

a pair of wedge shaped guide elements within said latch housing, each having a planar guiding surface disposed opposite an inclined surface thereof, said inclined surface being inclined at an angle that corresponds inversely to an inclination angle of the tapered lateral edges of the lock housing, said pair of guide elements being disposed at lateral sides of the latch housing, whereby the inclined surfaces of the guide elements engage with the tapered lateral edges of the lock housing as it is inserted into the latch housing;

a pair of bores extending in the latching direction, one within each of said guide elements; and

a pair of guide rods fixedly mounted to said latch housing, which guide rods extend axially in each of said bores, respectively, and resiliently support said guide elements against movement in the latching direction;

wherein an amount of lateral play between said guide rods and said bores allows lateral movement of said guide elements relative to said guide rods and said latch housing, so that said guiding surfaces move into contact with planar lateral interior surfaces of said latch housing as said lock housing is inserted into the latch housing in the latching direction.